Project Fact Sheet

Project Purpose

The Metropolitan Transportation Commission (MTC) and the California Department of Transportation (Caltrans) completed the study to evaluate building a pathway facility on the west span of the San Francisco Oakland Bay Bridge (SFOBB). The pathway would be a continuation of the bicycle/pedestrian pathway designed for the proposed new replacement bridge from Oakland to Yerba Buena Island (the east span). The project limits for this feasibility study extend from Yerba Buena Island to San Francisco on the SFOBB west suspension spans of Interstate 80. The purpose of this study was to determine if adding a pathway facility to the existing west span structure is technically feasible, and to develop a cost estimate for such a facility. The results of the study have determined it is feasible to construct a pathway on the west span. Two alternative pathway designs have been included in the feasibility study for consideration by the MTC.

Where to Review the Study

Copies of the complete study will be available in June for your review at the following locations:

- Main Library, Oakland, CA
- Main Library, San Francisco, CA
- MTC Library, Oakland, CA
- Caltrans District 4 Library, Oakland, CA

The feasibility study executive summary is available at:

www.dot.ca.gov/dist4/bbbikepathph.htm

or

www.mtc.ca.gov

Figure 1. - Alternative 1

Figure 2. - Alternative 2
Project Description and Cost Estimates

The study process has developed two design alternatives. Both alternatives would construct 12 to 15 foot wide pathways on both sides of the upper deck, with bi-directional traffic flow. Alternative 1 (see Figure 1) utilizes a design that blends with the architecture of the bridge and continues the visual themes of the existing bridge. The scheme for Alternative 1 is characterized by a modern, state-of-the-art architectural concept and is designed to be as light-weight as possible. To minimize the deflection of the bridge and to maintain existing vertical clearances, Alternative 1 will replace the existing lower deck of the bridge with a lighter-weight steel deck, adding to the project cost. Alternative 2 addresses maintenance of vertical clearance by utilizing lightweight materials and vertical cables that lift the bridge deck. The duration of construction for both alternatives is approximately 34 months following funding, environmental approvals, and design.

Table 1 provides a summary of capital cost estimates to implement the conceptual design alternatives. The costs are shown by the three sections of the bridge: the San Francisco Approach, Main Span, and Yerba Buena Island (YBI) Approach.

Table 1 - Capital Cost

<table>
<thead>
<tr>
<th>Alternative One - Deck Replacement:</th>
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<tbody>
<tr>
<td>San Francisco Approach</td>
<td>$21.4M</td>
<td>$340.4M</td>
<td>$24.9M</td>
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<tr>
<td>Main Span</td>
<td></td>
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<tr>
<td>YBI Approach</td>
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<tr>
<td><strong>Total</strong></td>
<td>$387M*</td>
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<table>
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<tr>
<th>Alternative Two - Lightweight:</th>
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<tbody>
<tr>
<td>San Francisco Approach</td>
<td>$21.4M</td>
<td>$114M</td>
<td>$24.9M</td>
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<tr>
<td>Main Span</td>
<td></td>
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<tr>
<td>YBI Approach</td>
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<tr>
<td><strong>Total</strong></td>
<td>$160M*</td>
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*All costs are at present year value (2001).

Next Steps

With the feasibility study complete, the MTC, acting as the Bay Area Toll Authority (BATA) will review the study findings to determine the project's feasibility, practicality, and fundability in relation to other regional projects. Should this project move forward, complete environmental review and project development would need to be performed to fully design the project for construction. Additional opportunities for public comment would be available during the environmental and design process.

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Bay Bridge

East Span Replacement

The MTC-run Bay Area Toll Authority (BATA) has joined with Caltrans to oversee the replacement of the aging and earthquake-vulnerable east span of the San Francisco-Oakland Bay Bridge. The design selected by BATA consists of a graceful, self-anchored, single-tower suspension span over the shipping channel, connecting to a causeway. Although the design was determined in 1998, the project suffered a series of setbacks and delays. The project got back on track in the fall of 2000 thanks to the intervention of federal agencies. Construction of the new span began in 2002.

Here is a timeline showing key milestones for the East Span replacement project.

East Span Replacement Project Timeline

1997

February: Caltrans decided to pursue the feasibility of building a new eastern span of the San Francisco-Oakland Bay Bridge, between Yerba Buena Island and Oakland, instead of seismically retrofitting the existing span. The goal: to build a new span that will meet "lifeline criteria" in the event of a major earthquake on the Hayward Fault.

March: MTC formed the Bay Bridge Design Task Force to develop a regional consensus on what a new span should look like. Seven MTC commissioners representing Alameda, Contra Costa and San Francisco counties and the Bay Conservation and Development Commission served on the Task Force. Their assignment: to review policy and design issues, generate public involvement and forge a regional consensus on the span replacement project.

MTC also created a 34-member Engineering and Design Advisory Panel (EDAP) to advise the Task Force on technical issues. Between March 1997 and June 1998, the Task Force and EDAP held 23 public meetings, plus a three-day design workshop, to review and analyze a dozen potential bridge designs and hear public comments. In addition to public testimony, MTC received and tallied hundreds of public comments submitted by phone, letters and e-mail.

July: The MTC Commission adopted a series of recommendations to guide the design process. A key MTC recommendation was that Caltrans should develop two design types to the 30 percent completion stage for the main span crossing the deep-water channel adjacent to Yerba Buena Island: a self-anchored suspension span and a cable-stayed span. This would provide more information about the relative seismic performance, cost and aesthetics of each type before a final decision was made.

MTC also ranked its priorities for allocating additional bridge project funding authorized by the Legislature to pay for three "amenities":

1) a cable-supported main span across the shipping channel adjacent to Yerba Buena Island (as opposed to a continuous causeway from Oakland to the Island); 2) renovation or relocation of the Transbay Transit Terminal; 3) building a bicycle/pedestrian path on the new span.

August: State financing to repair or replace seven state-owned toll bridges was finally resolved in Sacramento. Gov. Wilson signed into law two bills -- SB 60 and SB 226 (Sen. Kopp). SB 60 provides a combination of state funds and bridge toll revenues, generated by a $1 toll increase on Bay Area bridges. The $1 increase extends for eight years and allows MTC to continue it for two more years to pay for the amenities proposed for the Bay Bridge. The law and the toll increase went into effect Jan. 1, 1998. SB 226 transferred administration of the existing $1 toll on Bay Area bridges from the California Transportation Commission to
MTC, which carries out this function as the Bay Area Toll Authority (BATA).

**November:** Caltrans retained the joint-venture team of T.Y. Lin International/Moffatt & Nichol Engineers to develop designs for the self-anchored suspension and the cable-stay bridge types to the 30 percent stage.

**1998**

**June:** Gov. Wilson signed into law AB 2038 (Migden), which added a bicycle/pedestrian path on the existing west span of the Bay Bridge as a fourth "amenity" eligible for funding from the $1 bridge toll increase.

**July:** MTC, in its role as BATA, adopted further recommendations from the Bay Bridge Design Task Force. The most important is to have a single-tower, self-anchored suspension design for the main span across the channel adjacent to Yerba Buena Island.

**September:** Caltrans issued the federal Draft Environmental Impact Statement (DEIS) for the eastern span replacement project. The DEIS evaluated several alternatives for the design and alignment of the eastern span.

**November:** After holding public hearings and reviewing public comment on the proposed alternatives, Caltrans and the Federal Highway Administration identified building a new eastern span on the northern alignment, with a single-tower suspension main span, as the "preferred alternative."

 Voters in four cities (Emeryville, Berkeley, Oakland and San Francisco) supported identical ballot measures requesting MTC study incorporating rail on the Bay Bridge.

Conceptual planning began for a new Gateway Park on the Oakland shore, south of the touchdown of the new east span.

**1999**

**February:** Bay Bridge Design Task Force and EDAP held a joint information briefing to view a presentation by San Francisco representatives on the city's proposal for a "modified southern alignment." Task Force and EDAP members reiterated their support of the selected northern alignment.

**2000**

**July:** Study of rail on the bridge is concluded.

**August:** Design of Viaduct portion of the new span reaches 100 percent completion.

Caltrans launched a $3 million San Francisco-Oakland Bay Bridge West Span Pathway study (funded by MTC/BATA) to look at the technical feasibility and cost of extending the bicycle/pedestrian path onto the west span. (See Executive Summary and Fact Sheet of the report)

**September:** U.S. Army Corps of Engineers releases the first of two key reports. In its Interim Final Report, released on September 22, 2000, the Corps of Engineers endorsed the decision to rebuild rather than retrofit the existing east span by stating, "At this point in time, a replacement alternative is preferable to a retrofit alternative. A replacement alternative is the path that most quickly resolves the exposure of the public to the seismic vulnerabilities of the existing structure." (See memo on the report.)

**October:** U.S. Secretary of Transportation Rodney E. Slater announced on October 11, 2000 that the federal Department of Transportation (DOT) would use authority available under federal law to transfer from the Navy to the state of California land on Yerba Buena Island that will be needed for building the new east span. (See memo on the announcement.) The action resolved the right of way question that at one point had delayed drilling tests (setting the project back by nine months) and that threatened to block construction altogether.

On October 22, 2000, the U.S. Army Corps of Engineers released the second of its two key reports examining the seismic safety of the adopted design for the new span. While acknowledging that the bridge design was still incomplete, the report found that the design team was "moving toward a path to design a bridge that meets the seismic performance criteria." However, the report raised questions about which methods Caltrans should be employing to determine the earthquake ground motions that the new bridge needs to withstand. The report also recommended that Caltrans perform additional documentation, evaluation and testing of the replacement design as it nears completion.

**December:** On Dec. 7, 2000, the Engineering and Design Advisory Panel (or EDAP, which is affiliated with the BATA-sponsored Bay Bridge Design Task Force) met to respond to issues raised by the U.S. Army Corps of Engineers. An expert witness clearly demonstrated that Caltrans is using the best available method for determining ground motion. Caltrans also made a presentation indicating that the agency intends to implement
most of the Corps' recommendations for additional documentation and testing of the new east span design before construction begins (see letter from Caltrans).

2001

April: Caltrans issued an annual report to the Legislature and governor that detailed rising cost estimates and project time delays for the Toll Bridge Seismic Retrofit Program. Caltrans reported that cost forecasts for the program would rise from $2.6 billion, as adopted in SB 60 in 1997, to $4.6 billion.

May: Final Environmental Impact Statement was released. Caltrans concludes the San Francisco-Oakland Bay Bridge West Span Pathway study (funded by MTC/ BATA) to look at the technical feasibility and cost of extending the bicycle/pedestrian path onto the west span. The study found that, while such a path would be feasible to construct, the least expensive alternative would be more than $160 million (2001 dollars). (See Executive Summary and Fact Sheet of the report)

July: Federal Highway Administration official record of decision was filed.

BATA issues its cost review of the of the Toll Bridge Seismic Retrofit Program conducted by the Bechtel Infrastructure Corp. that details the potential for up to $630 million in additional cost increases in excess of the Caltrans forecast released in April.

October: Funding for the east span was secured with the passage of Assembly Bill 1171. A budget of $5.085 billion was established for the Toll Bridge Seismic Retrofit Program that included a $448 million program contingency.

December: Bids for the skyway portion of the bridge were opened.

2002

January: Construction officially commenced on the skyway portion of the bridge.

2003

April: Bids for the W2 Land Foundation for the Self Anchored Suspension Bridge were opened.

December: Bids for the South/South Detour on Yerba Buena Island from the Tunnel to the Self Anchored Suspension Bridge were opened.

2004

January: Bids for the E2/T1 Marine Foundations for the Self Anchored Suspension Bridge were opened.

May: A single bid for the Self Anchored Suspension Bridge was opened.

June: Caltrans requests assistance from BATA to review their cost forecasts of the Toll Bridge Seismic Retrofit Program.

August: Caltrans issued a report to the Legislature and governor that revealed rising cost estimates and project time delays for the Toll Bridge Seismic Retrofit Program. Caltrans reported that cost forecasts for the program would rise from $4.6 billion, as adopted in AB 1171, to $8.3 billion, including a $900 million program contingency.

2010

Construction of the westbound portion of the east span is expected to be completed in mid 2010.

Construction of the eastbound portion of the east span is expected to be completed in late 2010.

For more information, contact Rod McMillan, manager of Bridge and Highway Operations: e-mail -- rmcmillan@mtc.ca.gov, tel. 510/817-3260

ALSO SEE

http://www.mtc.ca.gov/planning/bay_bridge/bbhist.htm

11/15/2005